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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,426	07/07/2003	Stephen D. Russell	84892	8686

32697 7590 12/14/2004  
OFFICE OF PATENT COUNSEL  
SPAWARSYCEN, CODE 20012  
53510 SILVERGATE AVE. ROOM 103  
SAN DIEGO, CA 92152-5765

EXAMINER AKKAPEDDI, PRASAD R	
ART UNIT 2871	PAPER NUMBER

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b> 10/614,426	<b>Applicant(s)</b> RUSSELL ET AL.	
	<b>Examiner</b> Prasad R Akkapeddi	<b>Art Unit</b> 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. <u>11/17/2004</u> . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>07/07/2003</u> . | 6) <input type="checkbox"/> Other: ____.   |

## **DETAILED ACTION**

### ***Double Patenting***

1. Claims 1-9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,521,950 in view of Wanlass (U.S. Patent No. 3,881,175).

The only difference between the instant claims and those of the U.S. Patent 6,521,950 is the formation of "self-aligned circuitry" as recited in claim 1 of the instant application.

However, self-aligned circuitry on Silicon on Sapphire system is quite well known as taught by Wanlass (col. 3, lines 32-38).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the self-aligned circuitry technique as taught by Wanlass to the instant device to provide a reliable method for fabricating high-speed, high-density memory subsystems that is relatively inexpensive which will also decrease bonding requirements and lends itself to automatic fabrication (col. 2, lines 18-26).

2. Claims 10-17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,617,187 and claim 7 of U.S. Patent No. 6,521,950 in view of Merriam Webster College Dictionary, Tenth Edition, P 457.

The main difference between the instant claim 1 and that of U.S. Patent No. 6,617,187 is the step of 'affixing' vs. 'forming' a sapphire substrate to a single crystal (epitaxial) silicon structure).

The word 'form' is defined by the Merriam Webster College Dictionary as: 'to arrange themselves', 'to arrange in order'.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the word 'forming' in place of 'affixing' such that the sapphire substrate and the single crystal silicon structure can be arranged in an order (see Merriam Webster College Dictionary, P 457).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prasad R Akkapeddi whose telephone number is 571-272-2285. The examiner can normally be reached on 7:00AM to 5:30PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

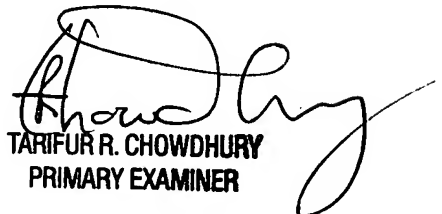
Art Unit: 2871

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PRA

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Prasad R Akkapeddi, Ph.D  
Examiner  
Art Unit 2871

  
TARIFUR R. CHOWDHURY  
PRIMARY EXAMINER